

AMENDMENTS TO THE CLAIMS

Claim 1 (original): A pharmaceutical composition comprising a psychotropic, neurotropic or neurological drug, or an antibiotic, antibacterial, antimycotic, antiviral, antiproliferative or antineoplastic drug, an amino acid or amino acid derivative specifically transported into a physiologically-protected site, two linker functional groups and a spacer, wherein the spacer has a first end and a second end and wherein the amino acid or amino acid derivative is attached to the first end of the spacer through a first linker functional group and the drug is attached to the second end of the spacer through a second linker functional group.


Claim 2 (original): The pharmaceutical composition of Claim 1 wherein the drug is L-dopa, hydroxytryptamine, amantadine, benztropine, bromocryptine, diphenhydramine, levadopa, pergolid, trihexphenidyl, ethosuximide, valproic acid, carbamazepine, 10-hydroxycarbamazepine, 11-hydroxycarbamazepine, primidone, gabapentin, lamotrigine, felbamate, paramethadione, trimethadione, phenothiazine, thioxanthene, clozapine, haldoperidol, loxapine, a benzodiazapene antidepressants of the norepinephrine reuptake inhibitor type, a monoamine oxidase inhibitor, carotene, glutathione, N-acetylcysteine, methotrexate, azidothymidine, dideoxyinosine, dideoxycytosine, acyclovir, or gancyclovir.

Claim 3 (original): A pharmaceutical composition according to Claim 1 wherein the spacer allows the drug to act without being released at an intracellular site and wherein the first linker functional group attached to the first end of the spacer is strong and the second linker functional group attached to the second end of the spacer is weak.

Claim 4 (original): A pharmaceutical composition according to Claim 1 wherein the spacer allows the facilitated hydrolytic release of the drug at an intracellular site and wherein the first linker functional group attached to the first end of the spacer is strong and the second linker functional group attached to the second end of the spacer is weak.

Claim 5 (original): A pharmaceutical composition according to Claim 1 wherein the spacer allows the facilitated enzymatic release of the drug at an intracellular site and wherein the first linker functional group attached to the first end of the spacer is strong and the second linker functional group attached to the second end of the spacer is weak.

Claim 6 (original): A pharmaceutical composition according to Claim 1 wherein the amino acid or derivative thereof is 5-hydroxytryptophan, serotonin, or melatonin.

 Claim 7 (original): A pharmaceutical composition comprising a psychotropic, neurotropic or neurological drug, or an antibiotic, antibacterial, antimycotic, antiviral, antiproliferative or antineoplastic drug, having a first functional linker group, and an amino acid or amino acid derivative specifically transported into a physiologically-protected site, having a second functional linker group, wherein the drug is covalently linked to the amino acid or amino acid derivative by a chemical bond between the first and second functional linker groups.

Claim 8 (original): A pharmaceutical composition according to Claim 7 wherein the first functional linker group is a hydroxyl group, a primary or secondary amino group, a phosphate group or substituted derivatives thereof or a carboxylic acid group.

Claim 9 (original): A pharmaceutical composition according to Claim 7 wherein the second functional linker group is a hydroxyl group, a primary or secondary amino group, a phosphate group or substituted derivatives thereof or a carboxylic acid group.

Claim 10 (original): A pharmaceutical composition according to Claim 7 wherein the amino acid or derivative thereof is 5-hydroxytryptophan, serotonin, or melatonin.

Claim 11 (original): The pharmaceutical composition of Claim 7 wherein the drug is L-dopa, hydroxytryptamine, amantadine, bztropine, bromocryptine, diphenhydramine, levodopa, pergolid, trihexphenidyl, ethosuximide, valproic acid, carbamazepine, 10-hydroxycarbamazepine, 11-hydroxycarbamazepine, primidone, gabapentin, lamotrigine,

felbamate, paramethadione, trimethadione, phenothiazine, thioxanthene, clozapine, haldoperidol, loxapine, a benzodiazapene antidepressants of the norepinephrine reuptake inhibitor type, a monoamine oxidase inhibitor, carotene, glutathione, N-acetylcysteine, methotrexate, azidothymidine, dideoxyinosine, dideoxycytosine, acyclovir, or gancyclovir.

Claims 12-17 (canceled)

Claim 18 (original): A pharmaceutical composition according to Claims 1 or 7 wherein the spacer is a peptide of formula (amino acid)_n, wherein n is an integer between 2 and 25, and the peptide comprises a polymer of one or more amino acids.

Am Claim 19 (original): A pharmaceutical composition according to Claim 1 comprising L-dopa, hydroxytryptamine, amantadine, benztropine, bromocryptine, diphenhydramine, levadopa, pergolid, trihexphenidyl, ethosuximide, valproic acid, carbamazepine, 10-hydroxycarbamazepine, 11-hydroxycarbamazepine, primidone, gabapentin, lamotrigine, felbamate, paramethadione, trimethadione, phenothiazine, thioxanthene, clozapine, haldoperidol, loxapine, a benzodiazapene antidepressants of the norepinephrine reuptake inhibitor type, a monoamine oxidase inhibitor, carotene, glutathione, N-acetylcysteine, methotrexate, azidothymidine, dideoxyinosine, dideoxycytosine, acyclovir, or gancyclovir.

Claims 20-33 (canceled)
